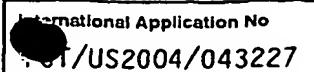
INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 801035/027 801035/153 B01D35/147 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 B01D F15B Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category ° US 5 772 868 A (REINHARDT ET AL) 1,4, 30 June 1998 (1998-06-30) 12-14 the whole document DE 101 13 179 A1 (RT-FILTERTECHNIK GMBH) 1,4, Α 12-14 26 September 2002 (2002-09-26) the whole document 19,22 FR 2 796 567 A (BERLY) Α 26 January 2001 (2001-01-26) figure 4 EP 0 844 012 A (DENSO CORPORATION) 19,22 27 May 1998 (1998-05-27) figure 1 AU 503 758 B2 (CARBORUNDUM CO., THE) 19,22 Α 20 September 1979 (1979-09-20) figures Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of clted documents: *T* later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not cited to understand the principle or theory underlying the considered to be of particular relevance invention *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to *L* document which may throw doubts on priority claim(s) or involve an inventive step when the document is taken alone which is cited to establish the publication date of another document of particular relevance; the claimed invention citation or other special reason (as specified) cannot be considered to involve an inventive step when the 'O' document referring to an oral disclosure, use, exhibition or document is combined with one or more other such documents, such combination being obvious to a person skilled other means in the art. *P* document published prior to the international filling date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 0.8. 07. 2005 30 June 2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Hilt, D Fax: (+31-70) 340-3016

Form PCT/ISA/210 (second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

ternational application No.
PCT/US2004/043227

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
1. X As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (January 2004)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18

A liquid filter assembly comprising:

- a housing having a liquid flow inlet arrangement; a first circulation loop for the liquid flow; a liquid flow outlet arrangement; and a tank reservoir liquid flow inlet / outlet;

- a suction filter assembly comprising a first, non-helical spring, directionally biased valve arrangement comprising a ring shaped valve member having at least one cut valve therein positioned.

2. claims: 19-22

A filter cartridge comprising:

-a primary filter cartridge section;

-a bypass filter cartridge section;

-a first end cap positioned between the primary filter cartridge section and the bypass filter cartridge section; -a second end cap positioned at an opposite end of the primary filter cartridge section from the first end cap.

INTERNATIONAL SEARCH REPORT

leternational Application No
Ternational Application No 1/US2004/043227

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